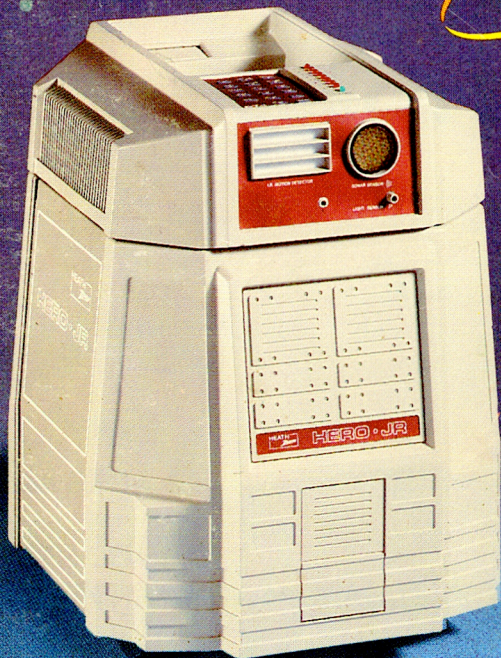# HERO · JR

HJPL

HERO · JR PROGRAMMING LANGUAGE

HEATH *Zenith*

SPEECH DICTIONARY

HERO Jr®
Speech Dictionary

Model RTC-1-10

HEATH COMPANY
BENTON HARBOR, MICHIGAN 49022

597-3864

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TABLE OF CONTENTS

INTRODUCTION

This booklet provides you with a listing of about 750 commonly used English words, with their phonemes and hex codes. With this listing you can find the words to let your Robot speak its mind on almost any subject.

In addition, the Phoneme Chart is reprinted twice in this booklet to help you troubleshoot and create words. The second chart is reorganized so that the phonemes are presented in alphabetical order; this organization makes it easier to find the sound you need when you create words. Space is provided on the last few pages for you to enter favorite words or phrases, or special words that you create yourself.

PHONEME DICTIONARY

The compilation of words was selected to fill more than one need. First, the 750 or so words must try to do the job of over 150,000 words that are available in a good English dictionary. Second, these words must be useful to typical speech patterns and apply to things you would typically want the Robot to say. The selected words follow, with the phonemes (to help you understand and create other words) and the hexadecimal numbers for entry in speech programs. A typical entry is shown on Page 4.

ACT

AE1 EH3 K T   (ACTUAL PHONEMES)
2F 00 19 2A (HEX-NUMBERS TO ENTER
            IN PROGRAM)

To make this dictionary more useful, remember to:
Look for homonyms and rhyming words
    ("sun" and "son")
    (use "stickey" to get "tricky"

Use parts of words
    (use "suggestion" to get "suggest")

use two words to build another
    (use "key" and "board" to build "keyboard")

A

A1 AY Y
06 21 29

ABLE

A1 Y B UH3 L
06 29 0E 23 18

ABOUT

UH1 B UH2 AH2 U1 T
32 0E 31 08 37 2A

ACCOUNT

UH1 K AH1 UH3 W N T
32 19 15 23 2D 0D 2A

ACROSS

UH1 K R AW S
32 19 2B 3D 1F

ACT

AE1 EH3 K T
2F 00 19 2A

ADDITION

AE1 EH3 D I1 I3 SH UH3 N
2F 00 1E 0B 09 11 23 0D

ADJUSTMENT

AE1 EH3 D J UH1 UH2 S T M EH1 EH3 N T
2F 00 1E 1A 32 31 1F 2A 0C 02 00 0D 2A

AFTER

AE1 EH3 F T ER
2F 00 1D 2A 3A

AGAIN

UH1 G A2 EH1 N
32 1C 05 02 0D

AGREEMENT

UH1 G R E1 Y M EH1 EH3 N T
32 1C 2B 3C 29 0C 02 00 0D 2A

AIR

EH2 EH2 R
01 01 2B

ALL

AW L

3D 18

ALMOST

AW L M O1 U1 S T

3D 18 0C 35 37 1F 2A

AMONG

UH1 M UH3 UH1 NG

32 0C 23 32 14

AND

AE1 EH3 N D

2F 00 0D 1E

ANGLE

AE1 EH3 NG G UH3 L

2F 00 14 1C 23 18

ANGRY

AE1 EH3 NG G R Y

2F 00 14 1C 2B 29

ANIMAL

AE1 EH3 N I1 I3 M UH3 L

2F 00 0D 0B 09 0C 23 18

ANSWER

AE1 EH3 N S ER

2F 00 0D 1F 3A

ANY

EH2 EH2 N Y

01 01 0D 29

APPROVAL

UH1 P R U1 V UH3 L

32 25 2B 37 0F 23 18

ARCH

AH1 R T CH

15 2B 2A 10

ARGUMENT

AH1 R G Y1 IU U1 U1 M EH1 EH3 N T

15 2B 1C 22 36 37 37 0C 02 00 0D 2A

ARM

AH1 R M

15 2B 0C

ARMY

AH1 R M Y

15 2B 0C 29

ART

AH1 R T

15 2B 2A

AS

AE1 EH3 Z

2F 00 12

AT

AE1 EH3 T

2F 00 2A

ATTACK

UH1 T AE1 EH3 K

32 2A 2F 00 19

ATTENTION

UH1 T EH1 EH3 N SH UH3 N

32 2A 02 00 0D 11 23 0D

ATTRACTION

UH1 T R AE1 EH3 K SH UH3 N

32 2A 2B 2F 00 19 11 23 0D

AUTOMATIC

AW T UH2 M AE1 EH3 T I1 K

3D 2A 31 0C 2F 00 2A 0B 19

AWAKE

UH1 W A1 AY Y K

32 2D 06 21 29 19

BABY

B A1 AY Y B Y

0E 06 21 29 0E 29

BACK

B AE1 EH3 K

0E 2F 00 19

BAD

B AE1 EH3 D
0E 2F 00 1E

BAG

B AE1 EH3 G
0E 2F 00 1C

BALANCE

B AE1 EH3 L EH3 N T S
0E 2F 00 18 00 0D 2A 1F

BALL

B AW L
0E 3D 18

BAND

B AE1 EH3 N D
0E 2F 00 0D 1E

BASE

B A1 AY Y S
0E 06 21 29 1F

BASKET

B AE1 EH3 S K EH3 T
0E 2F 00 1F 19 00 2A

BATH

B AE1 EH3 TH
0E 2F 00 39

BE (BEE)

B E1 Y
0E 3C 29

BEAUTIFUL

B Y1 IU U1 T I1 F OO1 L
0E 22 36 37 2A 0B 1D 16 18

BECAUSE

B Y K AW Z
0E 29 19 3D 12

BED

B EH1 EH3 D
0E 02 00 1E

BEFORE

B Y F 02 02 R
OE 29 1D 34 34 2B

BEHAVIOR

B Y H A1 B Y V Y1 IU U1 ER
OE 29 1B 06 09 29 0F 22 36 37 3A

BELIEF

B Y L E1 Y F
OE 29 18 3C 29 1D

BELL

B EH1 EH3 L
OE 02 00 18

BENT

B EH1 EH3 N T
OE 02 00 0D 2A

BERRY (BURY)

B EH1 EH3 R Y
OE 02 00 2B 29

BETWEEN

B Y T W E1 Y N
OE 29 2A 2D 3C 29 0D

BIG

B I1 I3 G
OE 0B 09 1C

BIRD

B ER R D
OE 3A 2B 1E

BIT

B I1 I3 T
OE 0B 09 2A

BITE

B UH3 AH2 Y T
OE 23 08 29 2A

BITTER

B I1 I3 T ER
OE 0B 09 2A 3A

BLACK

B L AE1 EH3 K K

0E 18 2F 00 19 19

BLOW

B L O1 U1

0E 18 35 37

BLUE

B L lU U1 U1

0E 18 36 37 37

BOARD

B O1 O2 R D

0E 35 34 2B 1E

BOAT

B O1 U1 T

0E 35 37 2A

BODY

B AH1 UH3 D Y

0E 15 23 1E 29

BOILING

B O1 UH3 I3 AY L I1 NG

0E 35 23 09 21 18 0B 14

BONE

B O1 U1 N

0E 35 37 0D

BOOK

B O01 O01 K

0E 16 16 19

BOOT

B U1 U1 T

0E 37 37 2A

BOTTLE

B AH1 UH3 T UH3 L

0E 15 23 2A 23 18

BOX

B AH1 UH3 K S

0E 15 23 19 1F

BOY

    B O1 UH3 I3 AY

    0E 35 23 09 21

BRAIN

    B R A1 AY Y N

    0E 2B 06 21 29 0D

BRAKE (BREAK)

    B R A1 AY Y K

    0E 2B 06 21 29 19

BRANCH

    B R AE1 EH3 N T CH

    0E 2B 2F 00 0D 2A 10

BREATH

    B R EH1 EH3 TH

    0E 2B 02 00 39

BRICK

    B R I1 I3 K

    0E 2B 0B 09 19

BRIDGE

    B R I1 I3 D J

    0E 2B 0B 09 1E 1A

BRIGHT

    B R UH3 AH2 Y T

    0E 2B 23 08 29 2A

BROKEN

    B R O1 K I2 N

    0E 2B 35 19 0A 0D

BROTHER

    B R UH1 UH3 THV ER

    0E 2B 32 23 38 3A

BROWN

    B R AH1 UH3 U1 N

    0E 2B 15 23 37 0D

BRUSH

    B R UH1 UH2 SH

    0E 2B 32 31 11

BUCKET

  B UH1 UH2 K EH3 T

  0E 32 31 19 00 2A

BUILDING

  B I2 I2 L D I1 I3 NG

  0E 0A 0A 18 1E 0B 09 14

BURN

  B ER R N

  0E 3A 2B 0D

BURST

  B ER R S T

  0E 3A 2B 1F 2A

BUSINESS

  B I3 I2 Z N EH1 S

  0E 09 0A 12 0D 02 1F

BUT

  B UH1 UH2 T

  0E 32 31 2A

BUTTER

  B UH1 UH2 T ER

  0E 32 31 2A 3A

BUTTON

  B UH1 UH2 T UH1 N

  0E 32 31 2A 32 0D

BYE (BY, BUY)

  B AH1 EH3 Y

  0E 15 00 29

CAKE

  K A1 AY Y K

  19 06 21 29 19

CAMERA

  K AE1 EH3 M ER UH2 UH3

  19 2F 00 0C 3A 31 23

CARD

  K AH1 R D

  19 15 2B 1E

CARE

K EH3 EH3 ER

19 00 00 3A

CART

K AH1 R T

19 15 2B 2A

CAT

K AE1 EH3 T

19 2F 00 2A

CAUSE

K AW Z

19 3D 12

CERTAIN

S ER T I1 I3 N

1F 3A 2A 0B 09 0D

CHAIN

T CH A1 AY Y N

2A 10 06 21 29 0D

CHANCE

T CH AE1 EH3 N S

2A 10 2F 00 0D 1F

CHANGE

T CH A1 AY Y N D J

2A 10 06 21 29 0D 1E 1A

CHEAP (CHEEP)

T CH E1 Y P

2A 10 3C 29 25

CHEESE

T CH E1 Y Z

2A 10 3C 29 12

CHEST

T CH EH1 EH3 S T

2A 10 02 00 1F 2A

CHIEF

T CH E1 Y F

2A 10 3C 29 1D

CHIN

T CH I1 I3 N
2A 10 0B 09 0D

CHURCH

T CH ER R T CH
2A 10 3A 2B 2A 10

CIRCLE

S ER R K UH3 L
1F 3A 2B 19 23 18

CLEAN

K L E1 Y N
19 18 3C 29 0D

CLEAR

K L AY I3 R
19 18 21 09 2B

CLOCK

K L AH1 UH3 K
19 18 15 23 19

CLOTH

K L AW TH
19 18 3D 39

CLOUD

K L AH1 UH3 W D
19 18 15 23 2D 1E

COAT

K O1 U1 T
19 35 37 2A

COLD

K O2 O2 L L D
19 34 34 18 18 1E

COLOR

K UH1 L ER
19 32 18 3A

COME

K UH1 UH3 M
19 32 23 0C

COMFORT

K AH1 UH3 M F O2 O2 R T
19 15 23 0C 1D 34 34 2B 2A

COMMITTEE

K UH1 UH3 M I1 I3 T E1 Y
19 32 23 0C 0B 09 2A 3C 29

COMMON

K AH1 UH3 M UH1 N
19 15 23 0C 32 0D

COMPANY

K UH1 UH3 M P AE1 EH3 N Y
19 32 23 0C 25 2F 00 0D 29

COMPLETE

K UH1 UH3 M P L E1 Y T
19 32 23 0C 25 18 3C 29 2A

COMPLEX

K AH1 UH3 M P L EH1 EH3 K PA0 S
19 15 23 0C 25 18 02 00 19 03 1F

CONDITION

K UH1 N D I1 I3 SH UH3 N
19 32 0D 1E 0B 09 11 23 0D

CONSCIOUS

K UH1 N SH UH1 S
19 32 0D 11 32 1F

CONTROL

K UH1 N T R O1 O2 L
19 32 0D 2A 2B 35 34 18

COOK

K OO1 OO1 K
19 16 16 19

COPY

K AH1 UH3 P Y
19 15 23 25 29

COUGH

K AW F
19 3D 1D

COUNTRY

K UH1 N T R Y
19 32 0D 2A 2B 29

COVER

K UH1 UH3 V ER
19 32 23 0F 3A

COW

K AH1 UH3 U1
19 15 23 37

CRACK

K R AE1 EH3 K
19 2B 2F 00 19

CREDIT

K R EH1 EH3 D I1 T
19 2B 02 00 1E 0B 2A

CRIME

K R AH1 EH3 Y M
19 2B 15 00 29 0C

CRUEL

K R IU U1 U1 L
19 2B 36 37 37 18

CRUSH

K R UH1 UH2 SH
19 2B 32 31 11

CRY

K R AH1 EH3 I3 Y
19 2B 15 00 09 29

CUP

K UH1 UH2 P
19 32 31 25

CURRENT

K ER R EH1 EH3 N T
19 3A 2B 02 00 0D 2A

CURTAIN

K ER R T I3 N
19 3A 2B 2A 09 0D

Page 16

CURVE

K ER R V
19 3A 2B 0F

CUSHION

K OO1 IU SH UH3 N
19 16 36 11 23 0D

CUT

K UH1 UH2 T
19 32 31 2A

DAMAGE

D AE1 EH3 M I1 D J
1E 2F 00 0C 0B 1E 1A

DANGER

D A1 AY Y N D J ER
1E 06 21 29 0D 1E 1A 3A

DARK

D AH1 R K
1E 15 2B 19

DAUGHTER

D AW T ER
1E 3D 2A 3A

DAY

D A1 I3 Y
1E 06 09 29

DEAD

D EH1 EH3 D
1E 02 00 1E

DEAR (DEER)

D AY I3 R
1E 21 09 2B

DEATH

D EH1 EH3 TH
1E 02 00 39

DEBT

D EH1 EH3 T
1E 02 00 2A

DECISION

   D Y S I1 ZH UH3 N

   1E 29 1F 0B 07 23 0D

DEEP

   D E1 Y P

   1E 3C 29 25

DEGREE

   D Y G R E1 Y

   1E 29 1C 2B 3C 29

DELICATE

   D EH1 L I1 K I1 T

   1E 02 18 0B 19 0B 2A

DEPENDENT

   D Y P EH1 EH3 N D EH1 EH3 N T

   1E 29 25 02 00 0D 1E 02 00 0D 2A

DESIGN

   D Y Z AH1 EH3 Y N

   1E 29 12 15 00 29 0D

DESTRUCTION

   D Y S T R UH1 UH2 K SH UH3 N

   1E 29 1F 2A 2B 32 31 19 11 23 0D

DETAIL

   D E1 Y T A1 AY Y L

   1E 3C 29 2A 06 21 29 18

DEVELOPMENT

   D E1 Y V EH1 L AH1 UH3 P M EH1 EH3 N T

   1E 3C 29 0F 02 18 15 23 25 0C 02 00 0D 2A

DIFFERENT

   D I1 I3 F ER EH1 EH3 N T

   1E 0B 09 1D 3A 02 00 0D 2A

DIRECTION

   D ER EH1 EH3 K T SH UH1 N

   1E 3A 02 00 19 2A 11 32 0D

DIRTY

   D ER R T Y

   1E 3A 2B 2A 29

DISCOVERY

D I1 S K UH1 UH3 V ER Y
1E 0B 1F 19 32 23 0F 3A 29

DISGUST

D I1 I3 S G UH1 UH2 S T
1E 0B 09 1F 1C 32 31 1F 2A

DISTANCE

D I1 S T EH3 N T S
1E 0B 1F 2A 00 0D 2A 1F

DISTRIBUTION

D I1 S T R I1 I3 B Y1 IU U1 U1
1E 0B 1F 2A 2B 0B 09 0E 22 36 37 37

SH UH3 N
11 23 0D

DIVISION

D I1 V I1 ZH UH3 N
1E 0B 0F 0B 07 23 0D

DO (DEW, DUE)

D IU U1 U1
1E 36 37 37

DOG

D AW G
1E 3D 1C

DOOR

D O1 O2 R
1E 35 34 2B

DOUBT

D UH2 AH2 U1 T
1E 31 08 37 2A

DOWN

D AH1 UH3 W N
1E 15 23 2D 0D

DRAIN

D R A1 AY Y N
1E 2B 06 21 29 0D

DRAWER

D R AW W ER
1E 2B 3D 2D 3A

DRESS

D R EH1 EH3 S
1E 2B 02 00 1F

DRINK

D R I1 I3 NG K
1E 2B 0B 09 14 19

DRIVING

D R AH1 EH3 Y V I1 NG
1E 2B 15 00 29 0F 0B 14

DROP

D R AH1 UH3 P
1E 2B 15 23 25

DRY

D R AH1 EH3 I3 Y
1E 2B 15 00 09 29

DUST

D UH1 UH2 S T
1E 32 31 1F 2A

EAR

E1 I2 R
3C 0A 2B

EARLY

ER R L Y
3A 2B 18 29

EARTH

ER R TH
3A 2B 39

EAST

E1 AY S T
3C 21 1F 2A

EDGE

EH1 EH3 D J
02 00 1E 1A

EDUCATION

EH1 D J IU K A1 Y SH UH3 N
02 1E 1A 36 19 06 29 11 23 0D

EFFECT

EH1 EH3 F EH1 EH3 K T
02 00 1D 02 00 19 2A

EMPTY

EH1 EH3 M P T Y
02 00 0C 25 2A 29

ELECTRIC

EH1 L EH1 EH3 K T R I1 I3 K
02 18 02 00 19 2A 2B 0B 09 19

END

EH1 EH3 N D
02 00 0D 1E

ENGINE

EH1 EH3 N N D J I1 N
02 00 0D 0D 1E 1A 0B 0D

ENOUGH

Y N UH1 UH3 F
29 0D 32 23 1D

EQUAL

Y K W UH3 L
29 19 2D 23 18

ERROR

EH3 EH3 EH3 R ER
00 00 00 2B 3A

EVEN

Y V I2 N
29 0F 0A 0D

EVER

EH1 V ER
02 0F 3A

EVERY

EH1 V ER Y
02 0F 3A 29

EXAMPLE

EH1 EH3 G PA0 Z AE1 EH3 M P UH3 L
02 00 1C 03 12 2F 00 0C 25 23 18

EXISTENCE

EH1 EH3 G PA0 Z I1 I3 S T EH1 EH3 N S
02 00 1C 03 12 0B 09 1F 2A 02 00 0D 1F

EXPERIENCE

EH1 EH3 K PA0 S P I1 R Y EH1 EH3 N S
02 00 19 03 1F 25 0B 2B 29 02 00 0D 1F

EXPERT

EH1 EH3 K PA0 S P ER T
02 00 19 03 1F 25 3A 2A

EYE

AH1 EH3 I3 Y
15 00 09 29

FACE

F A1 AY Y S
1D 06 21 29 1F

FACT

F AE1 EH3 K T
1D 2F 00 19 2A

FALL

F AW L
1D 3D 18

FALSE

F AW L S
1D 3D 18 1F

FAMILY

F AE1 EH3 M L Y
1D 2F 00 0C 18 29

FAR

F AH1 UH3 R
1D 15 23 2B

FARM

F AH1 R M
1D 15 2B 0C

FAT

   F AE1 EH3 T

   1D 2F 00 2A

FATHER

   F AH1 UH3 THV ER

   1D 15 23 38 3A

FEAR

   F AY I2 R

   1D 21 0A 2B

FEATHER

   F EH1 EH3 THV ER

   1D 02 00 38 3A

FEEBLE

   F E1 Y B UH3 L

   1D 3C 29 0E 23 18

FEELING

   F E1 Y L I1 NG

   1D 3C 29 18 0B 14

FEMALE

   F E1 Y M A1 AY Y L

   1D 3C 29 0C 06 21 29 18

FIELD

   F E1 Y L D

   1D 3C 29 18 1E

FIGHT

   F UH3 AH2 Y T

   1D 23 08 29 2A

FINGER

   F I1 I3 N NG G ER

   1D 0B 09 0D 14 1C 3A

FIRE

   F AH1 EH3 AY R

   1D 15 00 21 2B

FIRST

   F ER R S T

   1D 3A 2B 1F 2A

FIXED

    F I1 K PAO S T
    1D 0B 19 03 1F 2A

FLAG

    F L AE1 EH3 G
    1D 18 2F 00 1C

FLAME

    F L A1 AY Y M
    1D 18 06 21 29 0C

FLAT

    F L AE1 EH3 T
    1D 18 2F 00 2A

FLIGHT

    F L UH3 AH2 Y T
    1D 18 23 08 29 2A

FLOOR

    F L 01 02 R
    1D 18 35 34 2B

FLOWER

    F L AH1 W ER
    1D 18 15 2D 3A

FLY

    F L AH1 EH3 Y
    1D 18 15 00 29

FOLD

    F 02 02 L L D
    1D 34 34 18 18 1E

FOOD

    F U1 U1 D
    1D 37 37 1E

FOOLISH

    F U1 U1 L I1 SH
    1D 37 37 18 0B 11

FOOT

    F 001 001 T
    1D 16 16 2A

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FOR
F 02 02 R
1D 34 34 2B

FORCE
F 02 02 R S
1D 34 34 2B 1F

FORM
F 02 02 R M
1D 34 34 2B 0C

FORWARD
F 02 02 R W ER D
1D 34 34 2B 2D 3A 1E

FOUL (FOWL)
F AH1 UH3 W L
1D 15 23 2D 18

FREE
F R E1 Y
1D 2B 3C 29

FRIEND
F R EH1 EH2 N D
1D 2B 02 01 0D 1E

FROM
F R UH1 UH3 M
1D 2B 32 23 0C

FRONT
F R UH3 UH1 N T
1D 2B 23 32 0D 2A

FULL
F O01 L
1D 16 18

FUNNY
F UH1 UH2 N Y
1D 32 31 0D 29

FUTURE
F Y1 IU U1 U1 T CH ER
1D 22 36 37 37 2A 10 3A

GAME

    G A1 AY Y M
    1C 06 21 29 0C

GARDEN

    G AH1 R D I2 N
    1C 15 2B 1E 0A 0D

GENERAL

    D J EH1 EH3 N ER UH3 L
    1E 1A 02 00 0D 3A 23 18

GET

    G EH1 EH3 T
    1C 02 00 2A

GIRL

    G ER R L
    1C 3A 2B 18

GIVE

    G I1 I3 V
    1C 0B 09 0F

GLASS

    G L AE1 EH3 S
    1C 18 2F 00 1F

GLOVE

    G L UH1 UH3 V
    1C 18 32 23 0F

GO

    G O1 U1
    1C 35 37

GOAT

    G O1 U1 T
    1C 35 37 2A

GOLD

    G O2 O2 L L D
    1C 34 34 18 18 1E

GOOD

    G OO1 OO1 D
    1C 16 16 1E

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GOVERNMENT

G UH1 UH3 V ER N M EH1 EH3 N T
1C 32 23 0F 3A 0D 0C 02 00 0D 2A

GREAT

G R A1 Y T
1C 2B 06 29 2A

GREEN

G R E1 Y N
1C 2B 3C 29 0D

GRAY

G R A1 I3 Y
1C 2B 06 09 29

GRIP

G R I1 I3 P
1C 2B 0B 09 25

GROUP

G R U1 U1 P
1C 2B 37 37 25

GROWTH

G R O1 U1 TH
1C 2B 35 37 39

GUIDE

G AH1 EH3 Y D
1C 15 00 29 1E

GUN

G UH1 UH2 N
1C 32 31 0D

HAIR

H EH2 EH2 R
1B 01 01 2B

HAND

H AE1 EH3 N D
1B 2F 00 0D 1E

HANGING

H AE1 EH3 NG I1 I3 NG
1B 2F 00 14 0B 09 14

HAPPY

H AE1 EH3 P Y
1B 2F 00 25 29

HARD

H AH1 R D
1B 15 2B 1E

HARMONY

H AH1 R M UH3 N E1
1B 15 2B 0C 23 0D 3C

HAT

H AE1 EH3 T
1B 2F 00 2A

HATE

H A1 AY Y T
1B 06 21 29 2A

HAVE

H AE1 EH3 V
1B 2F 00 0F

HE

H E1 Y
1B 3C 29

HEAD

H EH1 EH3 D
1B 02 00 1E

HEALTHY

H EH1 EH3 L TH Y
1B 02 00 18 39 29

HEARING

H E1 I3 R I1 NG
1B 3C 09 2B 0B 14

HEART

H AH1 UH3 R T
1B 15 23 2B 2A

HEAT

H E1 AY T
1B 3C 21 2A

Page 28

HELP

   H EH1 EH3 L   P

   1B 02 00 18 25

HERE

   H AY I1 R

   1B 21 0B 2B

HIGH

   H AH1 EH3 Y

   1B 15 00 29

HISTORY

   H I1 I3 S T R Y

   1B 0B 09 1F 2A 2B 29

HOLE

   H O1 U1 L

   1B 35 37 18

HOOK

   H OO1 OO1 K

   1B 16 16 19

HOPE

   H O1 U1 P

   1B 35 37 25

HOUR (OUR)

   AH1 UH3 W ER

   15 23 2D 3A

HOUSE

   H UH3 AH2 U1 S

   1B 23 08 37 1F

HOW

   H AH1 O2 U1

   1B 15 34 37

HUMOR

   H Y1 IU U1 U1 M ER

   1B 22 36 37 37 0C 3A

HURRY

   H ER R Y

   1B 3A 2B 29

I

AH1 EH3 I3 Y
15 00 09 29

ICE

UH3 AH2 Y S
23 08 29 1F

IDEA

AH1 Y D AY Y UH2
15 29 1E 21 29 31

IF

I1 I3 F
0B 09 1D

ILL

I1 I3 L
0B 09 18

IMPORTANT

I1 I3 M P 02 02 R T EH3 N T
0B 09 0C 25 34 34 2B 2A 00 0D 2A

IMPULSE

I1 I3 M P UH1 UH2 L S
0B 09 0C 25 32 31 18 1F

IN

I1 I3 N
0B 09 0D

INCH

I1 I3 N T CH
0B 09 0D 2A 10

INCREASE

I1 I3 N K R E1 Y S
0B 09 0D 19 2B 3C 29 1F

INDUSTRY

I1 I3 N D UH1 UH2 S T R Y
0B 09 0D 1E 32 31 1F 2A 2B 29

INTEREST

I1 I3 N T ER EH1 EH3 S T
0B 09 0D 2A 3A 02 00 1F 2A

INVENTION
I1 I3 N V EH1 EH3 N SH UH3 N
0B 09 0D 0F 02 00 0D 11 23 0D

IRON
AH1 Y ER N
15 29 3A 0D

ISLAND
AH1 EH3 Y L EH3 N D
15 00 29 18 00 0D 1E

IT
I1 I3 T
0B 09 2A

JELLY
D J EH1 EH3 L Y
1E 1A 02 00 18 29

JEWEL
D J IU U1 U1 UH3 L
1E 1A 36 37 37 23 18

JOB
D J AH1 UH3 B
1E 1A 15 23 0E

JOIN
D J O1 UH3 I3 AY N
1E 1A 35 23 09 21 0D

JOKE
D J O1 U1 K
1E 1A 35 37 19

JUDGE
D J UH1 UH2 D J
1E 1A 32 31 1E 1A

JUMP
D J UH1 UH2 M P
1E 1A 32 31 0C 25

KEEP
K E1 Y P
19 3C 29 25

KETTLE

K EH1 EH3 T UH3 L
19 02 00 2A 23 18

KEY

K AY Y
19 21 29

KICK

K I1 I3 K
19 0B 09 19

KIND

K AH1 EH3 Y N D
19 15 00 29 0D 1E

KISS

K I1 I3 S
19 0B 09 1F

KNEE

N E1 Y
0D 3C 29

KNIFE

N UH3 AH2 Y F
0D 23 08 29 1D

KNOT

N AH1 UH3 T
0D 15 23 2A

KNOWLEDGE

N AH1 UH3 L EH3 D J
0D 15 23 18 00 1E 1A

LAND

L AE1 EH3 N D
18 2F 00 0D 1E

LANGUAGE

L AE1 EH3 NG G W I1 D J
18 2F 00 14 1C 2D 0B 1E 1A

LAST

L AE1 EH3 S T
18 2F 00 1F 2A

Page 32

LATE
    L A1 AY Y T
    18 06 21 29 2A

LAUGH
    L AE1 AE1 F
    18 2F 2F 1D

LAW
    L AW
    18 3D

LEAD (LEED)
    L Y AY D
    18 29 21 1E

LEAF
    L E1 AY F
    18 3C 21 1D

LEARNING
    L ER R N I1 I3 NG
    18 3A 2B 0D 0B 09 14

LED
    L EH1 EH3 D
    18 02 00 1E

LEFT
    L EH1 EH3 F T
    18 02 00 1D 2A

LEG
    L EH1 EH3 G
    18 02 00 1C

LET
    L EH1 EH3 T
    18 02 00 2A

LETTER
    L EH1 EH3 T ER
    18 02 00 2A 3A

LEVEL
    L EH1 EH3 V UH3 L
    18 02 00 0F 23 18

LIBRARY

L AH1 Y B R EH3 EH3 ER Y
18 15 29 0E 2B 00 00 3A 29

LIFT

L I1 I3 F T
18 0B 09 1D 2A

LIGHT

L UH3 AH2 Y T
18 23 08 29 2A

LIKE

L UH3 AH2 Y K
18 23 08 29 19

LIMIT

L I1 M I1 T
18 0B 0C 0B 2A

LINE

L AH1 EH3 Y N
18 15 00 29 0D

LIP

L I1 I3 P
18 0B 09 25

LIST

L I1 I3 S T
18 0B 09 1F 2A

LITTLE

L I1 I3 T UH3 L
18 0B 09 2A 23 18

LIVING

L I1 V I1 NG
18 0B 0F 0B 14

LOCK

L AH1 UH3 K
18 15 23 19

LONG

L AW NG
18 3D 14

LOOK

L 001 001 K
18 16 16 19

LOOSE

L U1 U1 S
18 37 37 1F

LOSS

L AW S
18 3D 1F

LOUD

L AH1 UH3 W D
18 15 23 2D 1E

LOVE

L UH1 UH3 V
18 32 23 0F

LOW

L 01 U1
18 35 37

MACHINE

M UH2 SH E1 Y N
0C 31 11 3C 29 0D

MAKE

M A1 AY Y K
0C 06 21 29 19

MALE (MAIL)

M A1 AY Y L
0C 06 21 29 18

MAN

M AE1 EH3 N
0C 2F 00 0D

MANAGER

M AE1 EH3 N EH1 D J ER
0C 2F 00 0D 02 1E 1A 3A

MAP

M AE1 EH3 P
0C 2F 00 25

MARK

M AH1 R K
0C 15 2B 19

MARKET

M AH1 R K EH3 T
0C 15 2B 19 00 2A

MARRIED

M EH2 EH3 R Y D
0C 01 00 2B 29 1E

MASS

M AE1 EH3 S
0C 2F 00 1F

MATCH

M AE1 EH3 T CH
0C 2F 00 2A 10

MATERIAL

M UH1 T I1 R Y UH3 L
0C 32 2A 0B 2B 29 23 18

MAY

M A1 I3 Y
0C 06 09 29

MEAL

M E1 AY L
0C 3C 21 18

MEASURE

M EH3 EH1 ZH ER
0C 00 02 07 3A

MEAT (MEET)

M E1 Y T
0C 3C 29 2A

MEDICAL

M EH1 EH3 D I1 K UH3 L
0C 02 00 1E 0B 19 23 18

MEETING

M E1 Y T I1 NG
0C 3C 29 2A 0B 14

MEMORY

M EH1 EH3 M O2 O2 R Y
0C 02 00 0C 34 34 2B 29

METAL

M EH1 EH3 T UH3 L
0C 02 00 2A 23 18

MIDDLE

M I1 I3 D UH3 L
0C 0B 09 1E 23 18

MILITARY

M I1 L I1 T EH3 EH3 ER Y
0C 0B 18 0B 2A 00 00 3A 29

MIND

M AH1 EH3 Y N D
0C 15 00 29 0D 1E

MINE

M AH1 EH3 Y N
0C 15 00 29 0D

MINUTE

M I1 N EH3 T
0C 0B 0D 00 2A

MIST

M I1 I3 S T
0C 0B 09 1F 2A

MIXED

M I1 K PA0 S T
0C 0B 19 03 1F 2A

MONEY

M UH3 UH1 N AY Y
0C 23 32 0D 21 29

MONTH

M UH3 UH1 N TH
0C 23 32 0D 39

MOON

M U1 U1 N
0C 37 37 0D

Page 37

MORNING

M O2 O2 R N I1 I3 NG
OC 34 34 2B 0D 0B 09 14

MOTHER

M UH1 UH3 THV ER
OC 32 23 38 3A

MOTION

M O2 O2 SH UH3 N
OC 34 34 11 23 0D

MOUNTAIN

M AH1 UH3 W N T I3 N
OC 15 23 2D 0D 2A 09 0D

MOUTH

M UH2 AH2 U1 TH
OC 31 08 37 39

MOVE

M U1 U1 V
OC 37 37 0F

MUCH

M UH1 UH2 T CH
OC 32 31 2A 10

MUSCLE

M UH1 UH2 S UH3 L
OC 32 31 1F 23 18

MUSIC

M Y1 IU U1 U1 Z I1 K
OC 22 36 37 37 12 0B 19

NAIL

N A1 AY Y L
OD 06 21 29 18

NAME

N A1 AY Y M
OD 06 21 29 0C

NARROW

N EH2 EH3 R O1 U1
OD 01 00 2B 35 37

NATION

N A1 Y SH UH3 N

0D 06 29 11 23 0D

NATURAL

N AE1 EH3 T CH ER UH3 L

0D 2F 00 2A 10 3A 23 18

NEAR

N AY I3 R

0D 21 09 2B

NECESSARY

N EH1 EH3 S EH1 EH3 S EH3 EH3 ER Y

0D 02 00 1F 02 00 1F 00 00 3A 29

NECK

N EH1 EH3 K

0D 02 00 19

NEED

N E1 Y D

0D 3C 29 1E

NEEDLE

N E1 Y D UH3 L

0D 3C 29 1E 23 18

NERVE

N ER V

0D 3A 0F

NET

N EH1 EH3 T

0D 02 00 2A

NEW

N IU U1 U1

0D 36 37 37

NEWS

N IU U1 U1 Z

0D 36 37 37 12

NIGHT

N UH3 AH2 Y T

0D 23 08 29 2A

NO

N O1 U1
0D 35 37

NOISE

N O1 UH3 I3 AY Z
0D 35 23 09 21 12

NORMAL

N O2 O2 R M UH3 L
0D 34 34 2B 0C 23 18

NORTH

N O2 O2 R TH
0D 34 34 2B 39

NOSE (KNOWS)

N O1 U1 Z
0D 35 37 12

NOT

N AH1 UH3 T
0D 15 23 2A

NOTE

N O1 U1 T
0D 35 37 2A

NOW

N AH1 UH3 U1
0D 15 23 37

NUMBER

N UH1 UH2 M B ER
0D 32 31 0C 0E 3A

ONE

W UH1 UH2 N
2D 32 31 0D

TWO

T IU U1 U1
2A 36 37 37

THREE

TH R E1 Y
39 2B 3C 29

FOUR

    F O1 O2 R
    1D 35 34 2B

FIVE

    F AH1 EH3 Y V
    1D 15 00 29 0F

SIX

    S I1 I3 K PA0 S
    1F 0B 09 19 03 1F

SEVEN

    S EH1 EH3 V I2 N
    1F 02 00 0F 0A 0D

EIGHT

    A2 A2 Y T
    05 05 29 2A

NINE

    N AH1 EH3 Y N
    0D 15 00 29 0D

TEN

    T EH1 EH3 N
    2A 02 00 0D

ELEVEN

    EH1 L EH1 EH3 V I2 N
    02 18 02 00 0F 0A 0D

TWELVE

    T W EH1 EH3 L V
    2A 2D 02 00 18 0F

THIRTEEN

    TH ER R T E1 Y N
    39 3A 2B 2A 3C 29 0D

FOURTEEN

    F O1 O2 R T E1 Y N
    1D 35 34 2B 2A 3C 29 0D

FIFTEEN

    F I1 I3 F T E1 Y N
    1D 0B 09 1D 2A 3C 29 0D

Page 41

SIXTEEN

S I1 I3 K PA0 S T E1 Y N
1F 0B 09 19 03 1F 2A 3C 29 0D

SEVENTEEN

S EH1 EH3 V EH1 EH3 N T E1 Y N
1F 02 00 0F 02 00 0D 2A 3C 29 0D

EIGHTEEN

A2 A2 Y T E1 Y N
05 05 29 2A 3C 29 0D

NINETEEN

N AH1 EH3 Y N T E1 Y N
0D 15 00 29 0D 2A 3C 29 0D

TWENTY

T W EH1 EH3 N T Y
2A 2D 02 00 0D 2A 29

THIRTY

TH ER R T Y
39 3A 2B 2A 29

FORTY

F 02 02 R T Y
1D 34 34 2B 2A 29

FIFTY

F I1 I3 F T Y
1D 0B 09 1D 2A 29

SIXTY

S I1 I3 K PA0 S T Y
1F 0B 09 19 03 1F 2A 29

SEVENTY

S EH1 EH3 V EH1 EH3 N T Y
1F 02 00 0F 02 00 0D 2A 29

EIGHTY

A2 A2 Y T Y
05 05 29 2A 29

NINETY

N AH1 EH3 Y N T Y
0D 15 00 29 0D 2A 29

HUNDRED

H UH1 UH2 N D R I3 D
1B 32 31 0D 1E 2B 09 1E

THOUSAND

TH AH1 UH3 U1 Z EH3 N D
39 15 23 37 12 00 0D 1E

MILLION

M I1 I3 L Y UH3 N
0C 0B 09 18 29 23 0D

NUT

N UH1 UH2 T
0D 32 31 2A

OF

UH1 UH3 V
32 23 0F

OFF

AW F
3D 1D

OFFER

AW F ER
3D 1D 3A

OFFICE

AW F I1 S
3D 1D 0B 1F

OFTEN

AW F EH1 EH3 N
3D 1D 02 00 0D

OIL

O1 UH3 I3 AY L
35 23 09 21 18

OLD

O2 O2 L L D
34 34 18 18 1E

ON

AH1 UH3 N
15 23 0D

ONLY

01 02 N L Y
35 34 0D 18 29

OPEN

01 P I2 N
35 25 0A 0D

OPINION

01 U1 P I1 I3 N Y UH3 N
35 37 25 0B 09 0D 29 23 0D

OPPOSITE

AH1 UH3 P UH1 S I1 T
15 23 25 32 1F 0B 2A

OR

02 02 R
34 34 2B

ORANGE

02 02 R I1 N D J
34 34 2B 0B 0D 1E 1A

ORDER

02 02 R D ER
34 34 2B 1E 3A

OTHER

UH1 UH3 THV ER
32 23 38 3A

OUT

UH3 AH2 U1 T
23 08 37 2A

OVEN

UH1 V I2 N
32 0F 0A 0D

OVER

01 02 V ER
35 34 0F 3A

OWNER

01 U1 N ER
35 37 0D 3A

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PAGE

    P A1 AY Y D J
    25 06 21 29 1E 1A

PAIN (PANE)

    P A1 AY Y N
    25 06 21 29 0D

PAINT

    P A1 AY Y N T
    25 06 21 29 0D 2A

PAPER

    P A1 AY Y P ER
    25 06 21 29 25 3A

PART

    P AH1 R T
    25 15 2B 2A

PAST

    P AE S T
    25 2E 1F 2A

PASTE

    P A1 AY Y T
    25 06 21 29 1F 2A

PAYMENT

    P A1 I3 Y M EH1 EH3 N T
    25 06 09 29 0C 02 00 0D 2A

PEACE

    P E1 AY S
    25 3C 21 1F

PEN

    P EH1 EH3 N
    25 02 00 0D

PENCIL

    P EH1 EH3 N S UH2 L
    25 02 00 0D 1F 31 18

PEOPLE

    P E1 Y P UH3 L
    25 3C 29 25 23 18

PERSON
```
  P  ER  S  UH1  N
  25  3A  1F  32  0D
```

PICTURE
```
  P  I1  I3  K  T  CH  ER
  25  0B  09  19  2A  10  3A
```

PIG
```
  P  I1  I3  G
  25  0B  09  1C
```

PIN
```
  P  I1  I3  N
  25  0B  09  0D
```

PIPE
```
  P  UH3  AH2  Y  P
  25  23  08  29  25
```

PLACE
```
  P  L  A1  AY  Y  S
  25  18  06  21  29  1F
```

PLANE (PLAIN)
```
  P  L  A1  AY  Y  N
  25  18  06  21  29  0D
```

PLANT
```
  P  L  AE1  EH3  N  T
  25  18  2F  00  0D  2A
```

PLAY
```
  P  L  A1  I3  Y
  25  18  06  09  29
```

PLEASE
```
  P  L  E1  AY  Z
  25  18  3C  21  12
```

POCKET
```
  P  AH1  UH3  K  EH3  T
  25  15  23  19  00  2A
```

POINT
```
  P  O1  UH3  I3  AY  N  T
  25  35  23  09  21  0D  2A
```

POISON

P O1 UH3 I3 AY Z UH1 N
25 35 23 09 21 12 32 0D

POLISH

P AH1 UH3 L I1 SH
25 15 23 18 0B 11

POLITICAL

P O1 U1 L EH1 T I1 K UH3 L
25 35 37 18 02 2A 0B 19 23 1B

POOR (POUR)

P O1 O2 R
25 35 34 2B

POSSIBLE

P AH1 UH3 S I1 I3 B UH3 L
25 15 23 1F 0B 09 0E 23 18

POT

P AH1 UH3 T
25 15 23 2A

POTATO

P UH1 T A1 Y T O1 U1
25 32 2A 06 29 2A 35 37

POWDER

P AH1 UH3 W D ER
25 15 23 2D 1E 3A

POWER

P AH1 UH3 W ER
25 15 23 2D 3A

PRESENT

P R EH1 Z EH1 EH3 N T
25 2B 02 12 02 00 0D 2A

PRICE

P R UH3 AH2 Y S
25 2B 23 08 29 1F

PRINT

P R I1 I3 N T
25 2B 0B 09 0D 2A

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PRISON

P   R   I1   I3   Z   UH1   N
25 2B 0B 09 12 32 0D

PRIVATE

P   R   AH1   EH3   Y   V   I3   T
25 2B 15 00 29 0F 09 2A

PROCESS

P   R   AH1   UH3   S   EH1   EH3   S
25 2B 15 23 1F 02 00 1F

PRODUCE

P   R   UH1   D   IU   U1   U1   S
25 2B 32 1E 36 37 37 1F

PROFIT

P   R   AH1   UH3   F   I1   T
25 2B 15 23 1D 0B 2A

PROPERTY

P   R   AH1   UH3   P   ER   T   Y
25 2B 15 23 25 3A 2A 29

PROTEST

P   R   UH1   T   EH1   EH3   S   T
25 2B 32 2A 02 00 1F 2A

PUBLIC

P   UH1   UH2   B   L   I1   I3   K
25 32 31 0E 18 0B 09 19

PULL

P   001   001   L
25 16 16 18

PUMP

P   UH1   UH2   M   P
25 32 31 0C 25

PUNISHMENT

P   UH1   N   I1   SH   M   EH1   EH3   N   T
25 32 0D 0B 11 0C 02 00 0D 2A

PURPOSE

P   ER   R   P   UH3   S
25 3A 2B 25 23 1F

Page 48

PUSH

P OO1 IU SH
25 16 36 11

PUT

P OO1OO1 T
25 16 16 2A

QUESTION

K W EH1 EH3 S T CH UH3 N
19 2D 02 00 1F 2A 10 23 0D

QUICK

K W I1 I3 K
19 2D 0B 09 19

QUIET

K W AH1 EH3 AY I2 T
19 2D 15 00 21 0A 2A

QUITE

K W UH3 AH2 Y T
19 2D 23 08 29 2A

RAIN

R A1 AY Y N
2B 06 21 29 0D

RANGE

R A1 AY Y N D J
2B 06 21 29 0D 1E 1A

RAT

R AE1 EH3 T
2B 2F 00 2A

RATE

R A1 AY Y T
2B 06 21 29 2A

RAY

R A1 I3 Y
2B 06 09 29

REACTION

R Y AE1 EH3 K SH UH3 N
2B 29 2F 00 19 11 23 0D

READING
R E1 Y D I1 NG
2B 3C 29 1E 0B 14

READY
R EH1 EH3 D Y
2B 02 00 1E 29

REASON
R E1 Y Z UH1 N
2B 3C 29 12 32 0D

RED
R EH1 EH3 D
2B 02 00 1E

REGULAR
R EH1 G Y1 IU L ER
2B 02 1C 22 36 18 3A

RELATION
R E1 L A1 Y SH UH3 N
2B 3C 18 06 29 11 23 0D

RELIGION
R E1 L I1 D J UH3 N
2B 3C 18 0B 1E 1A 23 0D

REQUEST
R E1 K W EH1 EH3 S T
2B 3C 19 2D 02 00 1F 2A

RESPECT
R E1 S P EH1 EH3 K T
2B 3C 1F 25 02 00 19 2A

RESPONSIBLE
R EH1 S P AH1 UH3 N S I1 I3 B UH3 L
2B 02 1F 25 15 23 0D 1F 0B 09 0E 23 18

REST
R EH1 EH3 S T
2B 02 00 1F 2A

REWARD
R E1 W 02 01 R D
2B 3C 2D 34 35 2B 1E

RHYTHM

  R I1 THV UH3 M

  2B 0B 38 23 0C

RIGHT

  R UH3 AH2 Y T

  2B 23 08 29 2A

RING

  R I1 I3 NG

  2B 0B 09 14

RIVER

  R I1 V ER

  2B 0B 0F 3A

ROAD

  R O1 U1 D

  2B 35 37 1E

ROBOT

  R O1 U1 B AH1 UH3 T

  2B 35 37 0E 15 23 2A

ROD

  R AH1 UH3 D

  2B 15 23 1E

ROLL

  R O1 UH3 L

  2B 35 23 18

ROOF

  R U1 U1 F

  2B 37 37 1D

ROOM

  R U1 U1 M

  2B 37 37 0C

ROOT

  R U1 U1 T

  2B 37 37 2A

ROUGH

  R UH1 UH3 F

  2B 32 23 1D

ROUND

   R AH1 UH3 W N D
2B 15 23 2D 0D 1E

RUB

   R UH1 UH2 B
2B 32 31 0E

RULE

   R IU U1 U1 L
2B 36 37 37 18

RUN

   R UH1 UH2 N
2B 32 31 0D

SAD

   S AE1 EH3 D
1F 2F 00 1E

SAFE

   S A1 AY Y F
1F 06 21 29 1D

SAIL (SALE)

   S A1 AY Y L
1F 06 21 29 18

SALT

   S AW L T
1F 3D 18 2A

SAME

   S A1 AY Y M
1F 06 21 29 0C

SAND

   S AE1 EH3 N D
1F 2F 00 0D 1E

SAY

   S A1 I3 Y
1F 06 09 29

SCALE

   S K A1 AY Y L
1F 19 06 21 29 18

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SCHOOL

S K U1 U1 L
1F 19 37 37 18

SCIENCE

S AH1 I3 AY EH1 EH3 N S
1F 15 09 21 02 00 0D 1F

SCISSORS

S I1 I3 Z ER Z
1F 0B 09 12 3A 12

SCREW

S K R IU U1 U1
1F 19 2B 36 37 37

SEAT

S E1 AY T
1F 3C 21 2A

SECOND

S EH1 EH3 K UH1 N D
1F 02 00 19 32 0D 1E

SECRET

S E1 K R I3 T
1F 3C 19 2B 09 2A

SECRETARY

S EH1 EH3 K R EH1 EH3 T EH3 EH3 ER Y
1F 02 00 19 2B 02 00 2A 00 00 3A 29

SEE (SEA)

S E1 Y
1F 3C 29

SEED

S E1 Y D
1F 3C 29 1E

SEEDY

S E1 Y D Y
1F 3C 29 1E 29

SEEM

S E1 Y M
1F 3C 29 0C

SELECTION

S EH1 EH3 L EH1 EH3 K SH UH3 N
1F 02 00 18 02 00 19 11 23 0D

SELF

S EH1 EH3 L F
1F 02 00 18 1D

SEND

S EH1 EH3 N D
1F 02 00 0D 1E

SENSE

S EH1 EH3 N S
1F 02 00 0D 1F

SEPARATE

S EH1 EH3 P UH1 R A1 AY T
1F 02 00 25 32 2B 06 21 2A

SEPARATE

S EH1 EH3 P ER I2 T
1F 02 00 25 3A 0A 2A

SERIOUS

S I1 R Y UH1 S
1F 0B 2B 29 32 1F

SERVANT

S ER V EH1 EH3 N T
1F 3A 0F 02 00 0D 2A

SEX

S EH1 EH3 K PAO S
1F 02 00 19 03 1F

SHADE

SH A1 AY Y D
11 06 21 29 1E

SHAKE

SH A1 AY Y K
11 06 21 29 19

SHAME

SH A1 AY Y M
11 06 21 29 0C

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SHARP

SH AH1 R P
11 15 2B 25

SHE

SH E1 Y
11 3C 29

SHEEP

SH E1 Y P
11 3C 29 25

SHELF

SH EH1 EH3 L F
11 02 00 18 1D

SHIP

SH I1 I3 P
11 0B 09 25

SHIRT

SH ER R T
11 3A 2B 2A

SHOCK

SH AH1 UH3 K
11 15 23 19

SHOE

SH U1 U1
11 37 37

SHORT

SH O2 O2 R T
11 34 34 2B 2A

SHUT

SH UH1 UH2 T
11 32 31 2A

SIDE

S AH1 EH3 Y D
1F 15 00 29 1E

SIGN

S AH1 EH3 Y N
1F 15 00 29 0D

SIMPLE

S I1 I3 M P UH3 L
1F 0B 09 0C 25 23 18

SISTER

S I1 I3 S T ER
1F 0B 09 1F 2A 3A

SIZE

S AH1 EH3 Y Z
1F 15 00 29 12

SKIN

S K I1 I3 N
1F 19 0B 09 0D

SKIRT

S K ER R T
1F 19 3A 2B 2A

SKY

S K AH1 EH3 I3 Y
1F 19 15 00 09 29

SLEEP

S L E1 Y P
1F 18 3C 29 25

SLIP

S L I1 I3 P
1F 18 0B 09 25

SLOPE

S L O1 U1 P
1F 18 35 37 25

SLOW

S L O1 U1
1F 18 35 37

SMALL

S M AW L
1F 0C 3D 18

SMASH

S M AE1 EH3 SH
1F 0C 2F 00 11

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SMELL

S M EH1 EH3 L
1F 0C 02 00 18

SMILE

S M AH1 EH3 I3 UH3 L
1F 0C 15 00 09 23 18

SMOKE

S M O1 U1 K
1F 0C 35 37 19

SMOOTH

S M U1 U1 THV
1F 0C 37 37 38

SNAKE

S N A1 AY Y K
1F 0D 06 21 29 19

SNEEZE

S N E1 Y Z
1F 0D 3C 29 12

SNOW

S N O1 U1
1F 0D 35 37

SO

S O1 U1
1F 35 37

SOAP

S O1 U1 P
1F 35 37 25

SOCIETY

S O2 O2 S AH1 EH3 AY I2 T Y
1F 34 34 1F 15 00 21 0A 2A 29

SOCK

S AH1 UH3 K
1F 15 23 19

SOFT

S AW F T
1F 3D 1D 2A

SOLID

  S AH1 UH3 L I1 D

  1F 15 23 18 0B 1E

SOME

  S UH1 UH3 M

  1F 32 23 0C

SON

  S UH3 UH1 N

  1F 23 32 0D

SONG

  S AW NG

  1F 3D 14

SORT

  S O2 O2 R T

  1F 34 34 2B 2A

SOUND

  S AH1 UH3 W N D

  1F 15 23 2D 0D 1E

SOUTH

  S AH1 UH3 U1 TH

  1F 15 23 37 39

SPACE

  S P A1 AY Y S

  1F 25 06 21 29 1F

SPADE

  S P A1 AY Y D

  1F 25 06 21 29 1E

SPECIAL

  S P EH1 EH3 SH UH3 L

  1F 25 02 00 11 23 18

SPRING

  S P R I1 I3 NG

  1F 25 2B 0B 09 14

SQUARE

  S K W EH1 R

  1F 19 2D 02 2B

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STAGE

    S T A1 AY Y D J

    1F 2A 06 21 29 1E 1A

STAMP

    S T AE1 EH3 M P

    1F 2A 2F 00 0C 25

STAR

    S T AH1 UH3 R

    1F 2A 15 23 2B

START

    S T AH1 R T

    1F 2A 15 2B 2A

STATEMENT

    S T A1 Y T M EH3 N T

    1F 2A 06 29 2A 0C 00 0D 2A

STATION

    S T A1 Y SH UH3 N

    1F 2A 06 29 11 23 0D

STEAM

    S T E1 AY M

    1F 2A 3C 21 0C

STEEL (STEAL)

    S T E1 Y L

    1F 2A 3C 29 18

STEM

    S T EH1 EH3 M

    1F 2A 02 00 0C

STEP

    S T EH1 EH3 P

    1F 2A 02 00 25

STICK

    S T I1 I3 K

    1F 2A 0B 09 19

STICKY

    S T I1 I3 K Y

    1F 2A 0B 09 19 29

STIFF

   S T I1 I3 F

   1F 2A 0B 09 1D

STILL

   S T I1 I3 L

   1F 2A 0B 09 18

STITCH

   S T I1 I3 T CH

   1F 2A 0B 09 2A 10

STONE

   S T O1 U1 N

   1F 2A 35 37 0D

STOP

   S T AH1 UH3 P

   1F 2A 15 23 25

STORE

   S T O2 O2 R

   1F 2A 34 34 2B

STORY

   S T O2 O2 R Y

   1F 2A 34 34 2B 29

STRAIGHT

   S T R A1 AY Y T

   1F 2A 2B 06 21 29 2A

STRANGE

   S T R A1 AY Y N D J

   1F 2A 2B 06 21 29 0D 1E 1A

STREET

   S T R E1 Y T

   1F 2A 2B 3C 29 2A

STRETCH

   S T R EH1 EH3 T CH

   1F 2A 2B 02 00 2A 10

STRONG

   S T R AW NG

   1F 2A 2B 3D 14

SUCH

S UH1 UH2 T CH

1F 32 31 2A 10

SUDDEN

S UH1 UH2 D I2 N

1F 32 31 1E 0A 0D

SUGAR

SH OO1 G ER

11 16 1C 3A

SUGGESTION

S UH1 UH2 G D J EH1 EH3 S T CH UH3 N

1F 32 31 1C 1E 1A 02 00 1F 2A 10 23 0D

SUMMER

S UH1 UH2 M ER

1F 32 31 0C 3A

SON (SUN)

S UH3 UH1 N

1F 23 32 0D

SUPPORT

S UH1 UH2 P O2 O2 R T

1F 32 31 25 34 34 2B 2A

SURPRISE

S ER R P R AH1 EH3 Y Z

1F 3A 2B 25 2B 15 00 29 12

SWEET

S W E1 Y T

1F 2D 3C 29 2A

SWIM

S W I1 I3 M

1F 2D 0B 09 0C

SYSTEM

S I1 S T EH1 EH3 M

1F 0B 1F 2A 02 00 0C

TABLE

T A1 Y B UH3 L

2A 06 29 0E 23 18

TAIL

    T A1 AY Y L

    2A 06 21 29 18

TAKE

    T A1 AY Y K

    2A 06 21 29 19

TALK

    T AW K

    2A 3D 19

TALL

    T AW L

    2A 3D 18

TASTE

    T A1 AY Y S T

    2A 06 21 29 1F 2A

TAX

    T AE1 EH3 K PA0 S

    2A 2F 00 19 03 1F

TEACHING

    T E1 AY T CH I1 I3 NG

    2A 3C 21 2A 10 0B 09 14

TENDENCY

    T EH1 EH3 N   D EH1 EH3 N   S Y

    2A 02 00 0D 1E 02 00 0D 1F 29

TEST

    T EH1 EH3 S   T

    2A 02 00 1F 2A

THAN

    TH AE1 EH3 N

    39 2F 00 0D

THAT

    THV AE1 EH3 T

    38 2F 00 2A

THE

    THV UH1 UH3

    38 32 23

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THEM

THV EH3 EH1 M

38 00 02 0C

THEN

THV EH3 EH1 N

38 00 02 0D

THEORY

TH AY I2 R Y

39 21 0A 2B 29

THERE

THV EH3 A2 EH3 R

38 00 05 00 2B

THEY

THV A1 AY Y

38 06 21 29

THICK

TH I1 I3 K

39 0B 09 19

THIN

TH I1 I3 N

39 0B 09 0D

THING

TH I1 I3 NG

39 0B 09 14

THIS

THV I3 I2 S

38 09 0A 1F

THOUGH

THV O2 O2 U1

38 34 34 37

THOUGHT

TH AW T

39 3D 2A

THROUGH

TH R IU U1

39 2B 36 37

THUMB

TH UH1 UH2 M

39 32 31 0C

THUNDER

TH UH1 UH2 N D ER

39 32 31 0D 1E 3A

TICKET

T I1 I3 K EH3 T

2A 0B 09 19 00 2A

TIGHT

T UH3 AH2 Y T

2A 23 08 29 2A

TILL

T I1 I3 L

2A 0B 09 18

TIME

T AH1 EH3 Y M

2A 15 00 29 0C

TIRED

T AH1 EH3 AY R D

2A 15 00 21 2B 1E

TO (TOO)

T U1 U1

2A 37 37

TOE (TOW)

T O1 U1 W

2A 35 37 2D

TOGETHER

T U1 G EH1 EH3 THV ER

2A 37 1C 02 00 38 3A

TOMORROW

T U1 M AH1 R O1 U1

2A 37 0C 15 2B 35 37

TONGUE

T UH1 UH3 NG

2A 32 23 14

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TOOTH

   T U1 U1 TH
  2A 37 37 39

TOP

   T AH1 UH3 P
  2A 15 23 25

TOUCH

   T UH1 UH3 T CH
  2A 32 23 2A 10

TOWN

   T AH1 UH3 U1 N
  2A 15 23 37 0D

TRADE

   T R A1 AY Y D
  2A 2B 06 21 29 1E

TRAIN

   T R A1 AY Y N
  2A 2B 06 21 29 0D

TRAY

   T R A1 AY Y
  2A 2B 06 21 29

TREE

   T R E1 Y
  2A 2B 3C 29

TRICK

   T R I1 I3 K
  2A 2B 0B 09 19

TROUBLE

   T R UH3 UH1 B UH3 L
  2A 2B 23 32 0E 23 18

TRUE

   T R IU U1 U1
  2A 2B 36 37 37

TRY

   T R AH1 EH3 I3 Y
  2A 2B 15 00 09 29

TURN

T ER R N
2A 3A 2B 0D

TWIST

T W I1 I3 S T
2A 2D 0B 09 1F 2A

UMBRELLA

UH1 UH2 M B R EH1 EH3 L UH2 UH3
32 31 0C 0E 2B 02 00 18 31 23

UNDER

UH2 UH2 N D ER
31 31 0D 1E 3A

UNIT

Y1 IU U1 N I1 I3 T
22 36 37 0D 0B 09 2A

UP

UH1 UH2 P
32 31 25

UPON

UH1 P AH1 UH3 N
32 25 15 23 0D

US

UH1 UH2 S
32 31 1F

USE

Y1 IU U1 U1 Z
22 36 37 37 12

USEFUL

Y1 IU U1 U1 S F OO1 L
22 36 37 37 1F 1D 16 18

VALUE

V AE1 EH3 L Y1 IU U1
0F 2F 00 18 22 36 37

VERSE

V ER S
0F 3A 1F

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VERY

V EH1 R Y
0F 02 2B 29

VESSEL

V EH1 EH3 S UH3 L
0F 02 00 1F 23 18

VIEW

V Y1 IU U1 U1
0F 22 36 37 37

VIOLENT

V AH1 AY UH3 L EH1 EH3 N T
0F 15 21 23 18 02 00 0D 2A

VOICE

V O1 UH3 I3 AY S
0F 35 23 09 21 1F

WAITING

W A1 AY Y T I1 NG
2D 06 21 29 2A 0B 14

WALK

W AW K
2D 3D 19

WALL

W AW L
2D 3D 18

WAR

W O1 O2 R
2D 35 34 2B

WARM

W O1 O2 R M
2D 35 34 2B 0C

WASH

W AW SH
2D 3D 11

WASTE

W A1 AY Y S T
2D 06 21 29 1F 2A

WATCH

W AH1 UH3 T CH
2D 15 23 2A 10

WATER

W AH1 UH3 T ER
2D 15 23 2A 3A

WAVE

W A1 AY Y V
2D 06 21 29 0F

WAX

W AE1 EH3 K PA0 S
2D 2F 00 19 03 1F

WAY

W A1 I3 Y
2D 06 09 29 .

WE

W E1 Y
2D 3C 29

WEATHER

2 EH1 EH3 THV ER
2D 02 00 38 3A

WEEK (WEAK)

W E1 Y K
2D 3C 29 19

WEIGHT (WAIT)

W A2 A2 Y T
2D 05 05 29 2A

WELL

W EH1 EH3 L
2D 02 00 18

WEST

W EH1 EH3 S T
2D 02 00 1F 2A

WET

W EH1 EH3 T
2D 02 00 2A

WHEEL
W E1 Y L
2D 3C 29 18

WHEN
W EH1 EH3 N
2D 02 00 0D

WHERE
W EH3 A2 EH3 R
2D 00 05 00 2B

WHILE
W AH1 EH3 I3 UH3 L
2D 15 00 09 23 18

WHISTLE
W I1 I3 S UH3 L
2D 0B 09 1F 23 18

WHITE
W UH3 AH2 Y T
2D 23 08 29 2A

WHO
H IU U1 U1
1B 36 37 37

WHY
W AH1 EH3 I3 Y
2D 15 00 09 29

WIDE
W AH1 EH3 Y D
2D 15 00 29 1E

WILL
W I1 I3 L
2D 0B 09 18

WIND
W I1 N D
2D 0B 0D 1E

WINDOW
W I1 N D O1 U1
2D 0B 0D 1E 35 37

WINE

W AH1 EH3 Y N

2D 15 00 29 0D

WING

W I1 I3 NG

2D 0B 09 14

WINTER

W I1 I3 N T ER

2D 0B 09 0D 2A 3A

WIRE

W AH1 EH3 AY R

2D 15 00 21 2B

WISE

W AH1 EH3 Y Z

2D 15 00 29 12

WISH

W I1 I3 SH

2D 0B 09 11

WITH

W I1 I3 TH

2D 0B 09 39

WOMAN

2 OO1 M EH2 N

2D 16 0C 01 0D

WOOD (WOULD)

W OO1 OO1 D

2D 16 16 1E

WORD

W ER R D

2D 3A 2B 1E

WORK

W ER R K

2D 3A 2B 19

WORM

W ER R M

2D 3A 2B 0C

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WOUND

W　U1　U1　N　D
2D　37　37　0D　1E

WRITING

R　UH3　AH2　Y　T　I1　NG
2B　23　08　29　2A　0B　14

WRONG

R　AW　NG
2B　3D　14

YEAR

Y1　AY　I3　R
22　21　09　2B

YELLOW

Y1　EH1　EH3　L　O1　U1
22　02　00　18　35　37

YES

Y1　EH3　EH1　S
22　00　02　1F

YESTERDAY

Y1　EH3　EH1　S　T　ER　D　A1　I3　Y
22　00　02　1F　2A　3A　1E　06　09　29

YOU

Y1　IU　U1　U1
22　36　37　37

YOUNG

Y　UH3　UH1　NG
29　23　32　14

PHONEME CHARTS

Each of the following two charts contains the same information (phonemes and the hexadecimal codes that make the Robot say each phoneme), but they are organized differently. The first chart is organized according to the hexadecimal code, so that you can find the phoneme if you know the hexadecimal number. The second chart is organized alphabetically by phoneme, so that you can find the hexadecimal number you want if you know the sound you wish to make.

PHONEMES
(organized by number)

Phoneme Code	Phoneme Symbol	Duration (ms)	Example Word
00	EH3	59	jacket
01	EH2	71	enlist
02	EH1	121	heavy
03	PA0	47	no sound
04	DT	47	butter
05	A2	71	made
06	A1	103	made
07	ZH	90	azure
08	AH2	71	honest
09	I3	55	inhibit
0A	I2	80	inhibit
0B	I1	121	inhibit
0C	M	103	mat
0D	N	80	sun

Phoneme Code	Phoneme Symbol	Duration (ms)	Example Word
0E	B	71	bag
0F	V	71	van
10	CH*	71	chip
11	SH	121	shop
12	Z	71	zoo
13	AW1	146	lawful
14	NG	121	thing
15	AH1	146	father
16	OO1	103	looking
17	OO	185	book
18	L	103	land
19	K	80	trick
1A	J*	47	judge
1B	H	71	hello
1C	G	71	get

*T must precede CH to produce CH sound.

D must precede J to produce J sound.

Phoneme Code	Phoneme Symbol	Duration (ms)	Example Word
1D	F	103	fast
1E	D	55	paid
1F	S	90	pass
20	A	185	day
21	AY	65	day
22	Y1	80	yard
23	UH3	47	mission
24	AH	250	mop
25	P	103	past
26	O	185	cold
27	I	185	pin
28	U	185	move
29	Y	103	any
2A	T	71	tap
2B	R	90	red
2C	E	185	meet
2D	W	80	win

Phoneme Code	Phoneme Symbol	Duration (ms)	Example Word
2E	AE	185	dad
2F	AE1	103	after
30	AW2	90	salty
31	UH2	71	about
32	UH1	103	uncle
33	UH	185	cup
34	O2	80	for
35	O1	121	aboard
36	IU	59	you
37	U1	90	you
38	THV	80	the
39	TH	71	thin
3A	ER	146	bird
3B	EH	185	get
3C	E1	121	be
3D	AW	250	call
3E	PA1	185	no sound
3F	STOP	47	no sound

PHONEMES
(organized alphabetically)

Phoneme Code	Code Symbol	Duration (ms)	Example Word
A	20	185	day
A1	06	103	made
A2	05	71	made
AE	2E	185	dad
AE1	2F	103	after
AH	24	250	mop
AH1	15	146	father
AH2	08	71	honest
AW	3D	250	call
AW1	13	146	lawful
AW2	30	90	salty
AY	21	65	day
B	0E	71	bag
CH*	10	71	chop

*T must precede CH to produce CH sound.

Phoneme Code	Code Symbol	Duration (ms)	Example Word
D	1E	55	fade
DT	04	47	butter
E	2C	185	meet
E1	3C	121	be
EH	3B	185	get
EH1	02	121	heavy
EH2	01	71	enlist
EH3	00	59	jacket
ER	3A	146	bird
F	1D	103	fast
G	1C	71	get
H	1B	71	hello
I	27	185	pin
I1	0B	121	inhibit
I2	0A	80	inhibit

Phoneme Code	Code Symbol	Duration (ms)	Example Word
I3	09	55	inhibit
IU	36	59	you
J*	1A	47	judge
K	19	80	trick
L	18	103	land
M	0C	103	mat
N	0D	80	sun
NG	14	121	ring
O	26	185	cold
O1	35	121	aboard
O2	34	80	for
OO	17	185	book
OO1	16	103	looking
P	25	103	past
R	2B	90	red
S	1F	90	pass
SH	11	121	shop

D must precede J to produce J sound.

Phoneme Code	Code Symbol	Duration (ms)	Example Word
T	2A	71	tap
TH	39	71	thin
THV	38	80	the
U	28	185	move
U1	37	90	you
UH	33	185	cup
UH1	32	103	uncle
UH2	31	71	about
UH3	23	47	mission
V	0F	71	van
W	2D	80	win
Y	29	103	any
Y1	22	80	yard
Z	12	71	zoo
ZH	07	90	azure
PA0	03	47	no sound
PA1	3E	185	no sound
STOP	3F	47	no sound

NOTES

Use the following space to enter notes or discoveries about programming speech, or the specific codes for words or phrases you have developed.